

Remarks:

Concerning the withdrawal from consideration of claims 28-35, it is noted that claim 28 depends upon claim 11 and is drawn to a process of preparing the baked product of claim 11, and claims 29-35 depend upon claim 28. The reason for the withdrawal from consideration of these claims is newly stated to be that "the product as claimed can be made by another and materially different process," but no such different process is identified or referred to in any way. Moreover, given that the product of claim 11 is a novel product (notwithstanding the rejection of claim 11, see below), it is not clear how there can be such a process known to those skilled in the art.

The process of claim 28 and claims dependent thereon is believed to encompass all methods of making the product of claim 11 known to the inventors at this time and disclosed in the specification.

As explained in detail below, all the product claims 1-19 are believed to be allowable over the art of record. Rejoinder and allowance of the method claims 20-35 is therefore believed to be in order, and is respectfully solicited.

35 U.S.C. §102

Claims 1, 2, and 6 have been rejected under 35 USC 102(b) as anticipated by Kim US 4,442,132.

The rejection is respectfully traversed, because Kim does not in fact provide an enabling disclosure of the present invention to one skilled in the art.

As stated in the specification at page 8, lines 10-20 and claimed in claims 1, 2, and 6, the present invention provides a baking mixture such as batter or dough for baking heat-deformable non-perishable baked goods characterized by a diminished level of sweet taste made from flours and/or starches, having certain physical properties, in particular a plastic state at an elevated temperature, a diminished level of sweet taste, and a crispy and brittle texture at ambient temperature. No such baking mixture or resulting baked product is disclosed by Kim.

Kim discloses "light bakery products having a low digestible carbohydrate content....which are very well suited for consumption by diabetics." (Description, first paragraph, col. 1).

The disclosed products contain less than 10% by weight of digestible carbohydrate. This is accomplished as disclosed, by replacing both the flour and the sugar by substitutes (see Abstract, claim 1 and paragraphs 7-9 of Description), in particular by limiting the amount of flour to a maximum of 15%

by weight and less than the weight % of flour substitute. Kim characterizes prior art products containing a greater proportion of flour, such as that of US 3,658,553 containing 40% of wheat flour, as not suitable for diabetics. Kim's examples disclose 7.0%, 0.8%, 7.3%, 7.0%, 0.8%, and 0.8% flour respectively by weight of the recipe.

Thus Kim clearly discloses a composition in which the use of flour is avoided. One skilled in the art not having knowledge of the present invention therefore does not find in Kim the baking mixture for non-perishable baked goods made from flours and/or starches required according to claims 1, 2, and 6. The present invention is contrary to Kim's disclosure.

Kim discloses the preparation of baked products, such as nut cookies, biscuit savoye, chocolate coated cakes, and pie crust that are mixed, baked, cooled, and packaged. Kim nowhere discloses a baking mixture or resulting baked product that is or can be deformed after baking in a heated plastic state, as required according to claims 1, 2, and 6.

The products disclosed by Kim are obtained starting from a blend comprising, among other ingredients, 5-50% of a sugar alcohol. Lactitol, sorbitol and xylitol are disclosed as suitable. Lactitol is disclosed as preferred; it is disclosed that

The caloric value of lactitol amounts only to maximally half of that of saccharose so that in diabetic products this sugar alcohol is preferred to sorbitol and xylitol both having the same caloric value as saccharose.

Kim further discloses that the use of lactitol as the sugar substitute in the disclosed products is "pre-eminently suitable for the preparation of crisp products."

However, "(w)hen employing more hygroscopic polyols such as sorbitol and xylitol, crisp products can not be prepared, bakery products prepared with the aid of sorbitol or xylitol becoming soft very soon after the preparation thereof."

Thus Kim fails to disclose a baking mixture comprising xylitol as partial or complete replacement for sugar to give a crisp product as required according to the present invention. Kim discloses the contrary, i.e. that no crispy product can be obtained when using xylitol.

A proper rejection under 35 U.S.C. §102(b) requires one reference to disclose each element of the rejected claim. Elements not disclosed by Kim have been identified in each of claims 1, 2, and 6. Hence claims 1, 2, and 6 are not anticipated by Kim. The rejection should be withdrawn.

Claims 1, 2, and 11 have been rejected under 35 USC 102(b) as anticipated by Kondo, an English language abstract of Japanese specification 01312960A.

The rejection is respectfully traversed, because Kondo does not in fact provide an enabling disclosure of the present invention to one skilled in the art.

Kondo discloses a mixture of saccharides composed of 25-75 wt.% meso-erythritol and 75-25% wt. % at least one saccharide selected from sugar and sugaralcohol other than meso-erythritol used as edulcorant in a kneaded powder cake.

As already pointed out above, the present invention requires the claimed bakery mixtures and resulting baked products to have the property of being deformable in a heated plastic state. No such deformable baking mixture or resulting baked product are disclosed by Kondo.

In addition, claims 1 and 2 require erythritol and/or xylitol to be present in the baking mixture of the invention in specified proportions expressed in weight per cent of the amount of flour and/or starch in the mixture. No proportions of erythritol and/or xylitol to flour and/or starch are disclosed by Kondo.

Claim 11 requires a baked product deformable at an elevated temperature and characterized by a brittle and crispy texture at room temperature and a diminished level of sweetness, comprising, among other ingredients water in an amount not exceeding 10% by weight per cent of the total quantity of flour and starch, and an effective plasticizing amount of at least one aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom. While erythritol is indeed an aliphatic polyol with four carbon atoms and xylitol is an aliphatic polyol with five carbon atoms, Kondo does not disclose a controlled amount of water or a plasticizing amount of aliphatic polyol. Moreover, Kondo nowhere discloses a baked product characterized by a brittle and crispy texture at room temperature.

A proper rejection under 35 U.S.C. §102(b) requires one reference to disclose each element of the rejected claim. Elements not disclosed by Kondo have been identified in each of claims 1, 2, and 11. Hence claims 1, 2, and 11 are not anticipated by Kondo. The rejection should be withdrawn.

35 U.S.C. §103

Claims 1-19 have been rejected as unpatentable over Kim and Kondo.

It is acknowledged that the claims differ as to the specific type of baked product and the amounts used. It is noted, however, that "Kim discloses all bakery products (see claim 1), where bakery products would include wafers."

In taking this position, the rejection appears to confuse claim scope with knowledge imparted to those skilled in the art. Here, it remains indisputable that Kim provides no disclosure, teaching, or suggestion of any bakery product having the property required according to the present invention of being deformable in a heated plastic state. Kondo likewise provides no such disclosure, teaching or suggestion. Hence one skilled in the art on the priority date of this invention seeking knowledge of a baking mixture and resulting bakery product having the property of being deformable in a heated plastic state finds no assistance in Kim, in Kondo, or in both references considered together.

The rejection seeks support in *In re Boesch* 205 USPQ 215 for categorizing "the amount and manipulation of these components" (i.e. erythritol and xylitol) "as no more than optimization."

It is respectfully submitted that the present invention differs significantly from the facts considered by the Court in rejecting the claims in *Boesch*. In that case, "appellants argue that neither of the cited prior art references

recognizes the problem solved by them" (the problem being embrittlement of an alloy by precipitation of so-called sigma phase) but the Court stated "upon examination of the prior art references we do not agree," Id., at 218. The Court further noted that

In the above-quoted passage from '838 we note that lowering the N sub v value of a Co-Cr-Ni alloy (the claimed way to solve the problem) and deletion of the metals not constituted in precipitation from the N sub v calculation are expressly suggested.

Id., at 219.

In the present invention, achieving the claimed property of being deformable in a heated plastic state is not disclosed, taught or "expressly suggested" by either of the cited references Kim and Kondo or their combination, and furthermore according to Kim bakery products with the claimed property according to the present invention of having a brittle and crispy texture is explicitly disclosed as being can not be prepared with xylitol. Hence the present invention defines a patentably distinct and unobvious bakery mixture and resulting bakery product having properties not taught or suggested by the prior art.

The rejection also seeks support in *In re Kerkhoven* 205 USPQ 1069 and in *In re Gershon* 152 USPQ 602 for the conclusion that



the present claims are "drawn to a combination of known components which produces expected results."

It is respectfully submitted that the present invention differs so greatly from the matters considered by the Court in the cited cases that these cases are not controlling here.

In *Kerkhoven*, all claims were process claims. The Court rejected one group of process claims as "obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose."

At the same time, the Court granted a claim drawn to a process differing from the rejected claims by including a different process step.

This is clearly not the case in the present invention. It has already been explained above, and need not be here repeated verbatim, that the baking mixture and resulting bakery product of the present invention differ in composition and significant properties from the disclosures and suggestions of the cited prior art. The citation of *Kerkhoven* is believed to be irrelevant.

In *Gershon*, the claims under review defined a dentifrice comprising stated percentages of fluoride-compatible polishing agent; water-soluble fluoride, and buffering agent in amount sufficient to impart a pH of 5 to 6 in saliva. The Court stated the issue in the case to be

whether, in a dentifrice comprising a polishing agent, a fluoride and a germicide, it would have been obvious under 35 USC 103 to incorporate a buffering agent in a amount sufficient to maintain the pH for the claimed composition in the range from 5 to 6 in saliva.

Id., at 603.

The Court decided this issue in the affirmative on the basis of "the most pertinent primary reference", an article

"which, inter alia, contains the following statement: (quoted paragraph omitted) This statement suffices to show solubility obtained during the in vitro tests of the buffered dentifrices of applicants' invention in simulated saliva, in comparison with results obtained with unbuffered fluoride dentifrices, were "expected", as distinguished from unexpected, beneficial results. Expected beneficial results are evidence of obviousness of a claimed invention, just as unexpected beneficial results are evidence of unobviousness thereof."

The present invention is diametrically opposite to the case considered by the Court in *Gershon*. There is nothing in the cited references individually or in combination that would let one skilled in the art expect the beneficial property of the claimed bakery products being deformable in a heated plastic state. Hence *Gershon* provides no support for the rejection. *Gershon* supports the unobviousness and patentability of the present invention.

Additional explanation of how the invention claimed in each of the independent claims differs from the teachings of the prior art follows below.

Thus, the baking mixture of claim 1 is defined as

- made from flours and/or starches,
- affording baked goods being deformed after the baking step in the still plastic state or in the state which has become plastic again by reheating,
- comprising erythritol and/or xylitol as partial or complete sugar replacement,
- and the content of erythritol and/or xylitol when the sugar is completely replaced being from 12 to 55% by weight, based on the total of flour and starch.

With respect to the composition being made from flour and/or starches, the Examiner is respectfully referred to the

discussion above of the point in connection with the rejections under 35 U.S.C. §102(b).

With respect to erythritol and/or xylitol as partial replacement of sugar, it should be noted that this is contrary to the teaching of Kim since Kim only discloses compositions with 0% sugar.

With respect to erythritol and/or xylitol as complete replacement of sugar in compositions made with flour and/or starch according to the invention, it should be noted that the amount of erythritol and/or xylitol is specified as ranging from 12% to 55% by weight of the total of flour and starch. It is an amount of erythritol and/or xylitol within this range that affords the novel and unobvious property of being deformable in a heated plastic state of the baked product. Amounts of erythritol and/or xylitol outside of the specified range do not afford this property. Other polyhydric alcohols such as sorbitol and maltitol do not afford this property in any amount. In this connection, the Examiner's attention is respectfully directed to Examples 20 and 28 of the specification, where the amount of polyol at 10% by weight of flour and starch is less than the claimed minimum and hot rolling of the baked product was unsuccessful.

Since neither Kim nor Kondo disclose, teach, or suggest a baking mixture or resulting product with the property of being deformable in a heated plastic state of the baked product, the finding that this property is only achieved with certain polyols in specified amounts, and not with other amounts of the same polyols or with other polyols, is clearly an unexpected result.

The baking mixture of claim 6 is defined as

- a baking mixture for baking non-perishable baked goods made from flours and/or starches,
- said baked goods being deformable at an elevated temperature and characterized by a brittle and crispy texture at room temperature and a diminished level of sweetness,
- comprising, in weight per cent of the total quantity of flour and starch, 70-150% of water, 0-67% of a sugar,
- and an effective plasticizing amount of at least one aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom.

In claim 6, the elements of being made from flour and/or starch and of affording baked products deformable in a heated plastic state are as in claim 1, and need no further discussion here.

Claim 6 further requires the mixture to afford baked products characterized by a brittle and crispy texture at room temperature, and a diminished level of sweetness.

Claim 6 does not numerically specify the quantity of aliphatic polyol ingredient, but requires an effective plastic amount, that is a sufficient quantity to achieve the effect of the baked product being deformable in a heated state and also having a brittle and crispy texture at room temperature. The claimed aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom encompasses erythritol (four carbon atoms) and xylitol (five carbon atoms).

It should be noted Kim explicitly discloses that sorbitol and xylitol used in the disclosed composition failed to give crispy products, while Kondo is devoid of disclosure of any crispy product. Kim also discloses a crispy product containing lactitol, which is a sugar alcohol with twelve carbon atoms and ten hydroxyl groups.

Accordingly, the ability to obtain a crispy product with xylitol in the composition of claim 6 is directly contrary to the teaching of Kim and thus clearly an unexpected result. The ability to obtain a crispy product with erythritol is also unexpected, because like xylitol and unlike lactitol,

erythritol has a hydroxyl group on each carbon atom, and even fewer carbon atoms (4). One skilled in the art aware of Kim would most likely expect erythritol to fail in Kim's composition.

It should also be noted that the diminished level of sweetness is also an unobvious feature of the invention, not taught by Kim or Kondo or their combination. On the contrary, Kim emphasizes the sweet taste of the preferred lactitol ingredient, while Kondo characterizes the disclosed saccharide mixture as "edulcorant" (= sweetener) to achieve "a feeling of quality as well as using wholly cane sugar" (i.e. a product of similar sweetness).

The baked product of claim 11 is defined as

- Non-perishable baked goods made from flours and/or starches,
- said baked goods being deformable at an elevated temperature and characterized by a brittle and crispy texture at room temperature and a diminished level of sweetness,
- comprising, in weight per cent of the total quantity of flour and starch, water in an amount not exceeding 10%, 0-67% of a sugar,

- and an effective plasticizing amount of at least one aliphatic polyol having four to five carbon atoms and an alcoholic hydroxyl group linked to each carbon atom.

It can be seen that except for the diminished water content as a result of being baked, the composition closely parallels that of claim 6, and the differences from the teachings of the prior given above for claim 6 are to be applied here without being repeated verbatim.

Among the dependent claims, the Examiner's attention is respectfully directed to claim 17, dependent upon claim 11 by way of claim 13 and defining a baked product according to the invention having a neutral taste. Nothing in Kim, in Kondo, or in any combination of these references provides even the slightest hint of such a product.

#### SUMMARY

As explained above, it is respectfully submitted that claims 1-19 define patentable subject matter and are in order for prompt allowance, which is respectfully solicited. Moreover, claims 20-35 drawn to methods of making products within the scope of claims 1-19 are believed to be in order for rejoining and prompt allowance as well.



In view of the foregoing, reconsideration of claims 1-19 is kindly requested.

Respectfully submitted,



For Applicants

WERNER H. STEMER  
REG. NO. 34,956

OSK:tk

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Lerner and Greenberg, P.A.  
Post Office Box 2480  
Hollywood, FL 33022-2480  
Tel: (954) 925-1100  
Fax: (954) 925-1101